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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,301	01/07/2002	Yukinobu Yamazaki	020001	5983
23850	7590	04/13/2004		
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			EXAMINER HUG, ERIC J	
			ART UNIT 1731	PAPER NUMBER

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/019,301

Applicant(s)

YAMAZAKI ET AL.

Examiner

Eric Hug

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003 and 29 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 28-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44,51 and 53 is/are allowed.
- 6) ☒ Claim(s) 28-30,32-39,41-43,46,49,52 and 54-56 is/are rejected.
- 7) ☒ Claim(s) 31,40,45,47,48,50 and 57-59 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 28, 30, and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Shigemoto (US 5,106,692). Shigemoto discloses a laminate comprising a resin interlayer (layer B) made of 40-98% polyolefin, 0.1-20% of a carboxylic acid modified polyolefin, and 1-50% of a tackifier. The polyolefin component and its proportion read on claimed component (A), and the tackifier and its proportion read on claimed component (B). For claim 28, claimed component (C) is something other than carboxylic acid modified polyolefin, therefore the composition has been treated as comprising 0 parts component (C). For claim 30, component (C) is unspecified, therefore the above carboxylic acid modified polyolefin and its proportion read on claimed component (C). The polyolefin is an ethylene/alpha-olefin random copolymer, and can be an ethylene-propylene copolymer (column 2, lines 48-52), which reads on claim 34. Suitable tackifiers are given in column 3, lines 39-58, some of which read on the types given by claims 35 and 36.

2. Claims 28, 30, 34-36, 41, 43, 46, 54, and 55 are rejected under 35 U.S.C. 102(e) as being anticipated by Mito et al (US 6,333,119). Mito discloses an adhesive composition for paper comprising 30-80% linear polyethylene, 1-30% high pressure low-density polyethylene, 1-30% carboxylic acid modified polyethylene, and 1-30% of a tackifier. The combination of linear

polyethylene and low-density polyethylene and their total proportion read on claimed component (A), and the tackifier and its proportion read on claimed component (B). This is applicable to all the above claims. For claims 28, 30, 34-36, 41, 46, and 55, claimed component (C) comprises species other than carboxylic acid modified polyethylene, therefore for these claims the composition of the resin has been treated as having 0 parts component (C). For claims 43 and 54, claimed component (C) is unspecified, therefore, the carboxylic acid modified polyethylene has been treated as being the compatibilizing agent component (C), and thus reads on the claimed proportion of (C).

The composition is applied to one side of a sheet of paper before attaching a polymer layer thereto. Therefore, this reads on the resin/paper composition layer of claim 30 and its dependent claim 41, and reads on the paper of claims 43 and 46, and the method of producing the paper of claims 54 and 55.

The linear polyethylene may be a copolymer formed with propylene (column 2, lines 17-25), which reads on claim 34. The tackifiers are given in column 3, lines 20-41, which read on claims 35 and 36.

3. Claims 28, 30, 33, 35, 36, 41-43, 46, 49, 52, and 54-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Jarvis et al (US 5,441,999). Jarvis discloses a hot melt adhesive to be applied between sheets of paper, the adhesive comprising a polyolefin (40-70% olefin terpolymer), an olefin-carboxylic acid copolymer or olefin-maleic acid copolymer (5-20% of either or a blend), and a tackifying resin (10-40%). The polyolefin and its proportion read on claimed component (A), and the tackifying resin and its proportion read on

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claimed component (B). This is applicable to all the above claims. For claims 28, 30, 33, 35, 36, 41, 46, 49, 55, and 56, claimed component (C) comprises species other than carboxylic acid modified olefins, therefore for these claims the composition of the resin has been treated as having 0 parts component (C). For claims 42, 43, 52, and 54, claimed component (C) is unspecified, therefore, the carboxylic acid modified olefin has been treated as being the compatibilizing agent component (C), and thus reads on the claimed proportion of (C).

The composition is applied to one or both sides to a sheet of paper. Therefore, this reads on the resin/paper composition layer of claims 30 and 41, and reads on the paper of claims 42, 43, 46, and 49, and reads on the method of producing the paper of claims 52 and 54-56.

The polyolefin may include atactic polypropylene (see Example 3), which reads on claim 33. Suitable tackifiers are given starting on column 1, line 58, which read on claims 35 and 36.

4. Claims 28, 30, 32, and 34-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Shirakura et al (US 5,466,519). Shirakura discloses a waterproof resin that is disposed on a coated paper. The resin comprises a polyolefin, a tackifying resin, and optionally an adhesive resin which may be an acid-modified polyolefin. Titanium dioxide, talc, kaolin, or calcium carbonate may also be added. The composition reads on the claims as follows:

Claims 28 and 30: The polyolefin comprises 40-99.5% of the composition. Therefore, the tackifier is 0.5-60% of the composition. When adhesive resin is present, it is in the amount of 5-500% of the resin. Thus, it is possible to have a composition with all three components present in quantities within the claimed amounts.

The polyolefin component and its proportion read on claimed component (A), and the tackifying resin and its proportion read on claimed component (B). For claim 28, claimed component (C) is something other than acid modified polyolefin, therefore the composition has been treated as comprising 0 parts component (C). For claim 30, component (C) is unspecified, therefore the above acid modified polyolefin and its proportion read on claimed component (C).

Claim 34: The polyolefin can comprise polypropylene (column 3, lines 39-47).

Claims 35, 36: The tackifier can be rosin or any one of the claimed resins (column 5, lines 30-51).

Claims 32, 37, and 38: The composition can comprise up 5-60% titanium dioxide (column 4, lines 62-65) or up to 30% talc, kaolin, or calcium carbonate (column 6, lines 9-29). The inorganic fillers have an average particle size less than 5 microns. The titanium dioxide is 0.1-0.4 microns and the others are 0.01-1 microns.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 29 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shirakura et al (US 5,466,519) in view of the physical properties for titanium dioxide and calcium carbonate presented in the previous office action.

Shirakura discloses the waterproof resin comprising the components (A), (B), and (C) in the same proportions as described above. In particular for claim 39 (which depends on claim 32

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rejected above), claimed component (C) is something other than acid modified polyolefin, therefore the composition has been treated as comprising 0 parts component (C). For claim 29, component (C) is unspecified, therefore the above acid modified polyolefin and its proportion read on claimed component (C). The resin can also contain substantial amounts of titanium dioxide, calcium carbonate, clay, or talc as described above. Shirakura does not disclose the density of the resin composition, thus does not disclose that the density is at least  $1.0 \text{ g/cm}^3$ .

The specific gravity of titanium dioxide is 3.84 for anatase and 4.26 for rutile. The specific gravity of calcium carbonate is 2.930 for natural aragonite. Since the resin compositions of Shirakura contain up to 60% titanium dioxide or up to 30% calcium carbonate, then it would be obvious to one skilled in the art that resin compositions containing such fillers will have a final density greater than  $1.0 \text{ g/cm}^3$ , because the density of the filler material is much greater than  $1.0 \text{ g/cm}^3$ . Even for amounts of filler much less than 60% for titanium dioxide or 30% for calcium carbonate, the final resin would be expected to have an overall density greater than  $1.0 \text{ g/cm}^3$  because of the high density of the filler materials.

#### ***Allowable Subject Matter***

Claims 44, 51, 53 are allowed.

Claims 31, 40, 45, 47, 48, 50 and 57-59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 31, 47, 48, 58, and 59 are allowable and claim 51 is allowed for the additional presence of the (meth)acrylic resin layer.

Claim 40 is allowable for the additional presence of a matching color.

Claim 44 is allowed for the combination of the four components (A)-(D) and the additional penetration-proof layer.

Claim 45 is allowable for the additional presence of the filler in the claimed paper.

Claims 50 and 57 allowable and claim 53 is allowed for the additional presence of the penetration-proof layer.

#### ***Response to Arguments***

Applicant's arguments filed December 15, 2003 have been fully considered.

Applicant's arguments with respect to previous rejections based on Shigemoto or based on Shirakura are persuasive with respect to the claimed water-resistant and moisture proof paper and method for producing a water-resistant and moisture proof paper, as neither Shigemoto nor Shirakura teaches the claimed paper or claimed method. Thus, the rejections given above are concerned only with the resin composition.

It is particularly noted that Applicant has excluded certain compounds from compatibilizing agent (C) to read over the applied references, however Applicant has not addressed when these references read on claims where the claimed proportion of (C) is 0 parts by weight, i.e., where no compatibilizing agent is present, or on claims where the component (C) is unspecified.



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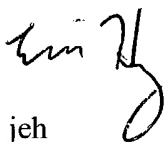
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
jeh

  
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